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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference B 1870 WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/007404	International filing date (day/month/year) 09 July 2003 (09.07.2003)	Priority date (day/month/year) 10 July 2002 (10.07.2002)
International Patent Classification (IPC) or national classification and IPC C02F 1/42		
Applicant BRITA GMBH		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 22 January 2004 (22.01.2004)	Date of completion of this report 29 October 2004 (29.10.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

I. Basis of the report**1. With regard to the elements of the international application:***

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-21 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-20 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____ 1/13-13/13 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/07404

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	5-7, 9-20	YES
	Claims	1-4, 8	NO
Inventive step (IS)	Claims		YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO

2. Citations and explanations

1. This report makes reference to the following documents:

D1: EP1160204

D2: US5427683

D3: EP1106578

D4: EP0668243

2. The subject matter of claims 1-4 and 10-20 does not meet the requirements of PCT Article 6 for the following reasons:

2.1 The entire characterising part of the device claim 1 relates to a method for designing a filter device and not to the definition of the filter device in terms of its technical features. Claim 1 is drafted, however, as a device claim, raising doubts as to the category of the claim and the scope of protection associated therewith, for the reasons explained below.

According to the subject matter of claim 1, the filter device is characterised by a particular ratio between the flow characteristics in the blending conduit B and filter conduit A. The flow characteristic of the individual

components A and B is selected so that a so-called blending condition is met. According to the description, this occurs iteratively, when a basic design is chosen, by varying the device components and by measuring pressure losses, taking into account the blending condition. The flow characteristic (pressure loss function) is definitely dependent on the volumetric flows in the conduits A and B and can therefore be determined experimentally only. The volumetric flow is in turn dependent on the intended use of the device, which is defined very broadly (purification and/or at least partial decarbonisation of untreated water). All this leaves a person skilled in the art uncertain as to the marginal conditions to be expected, such as the viscosity of the untreated water to be treated, which in turn is essentially dependent on solid content and ambient temperature. Given the number of possible uses mentioned in the description (cf. page 1, lines 20-29), a very large scope should be assumed, so that the experimental outlay required to determine the suitable device features (dimension of the filter chamber, porosity and apparent bulk density of the filter medium, pressure loss characteristic of the blending valve, etc.) is regarded as being considerable. Consequently, the characteristic features of the filter device cannot be derived from claim 1, even in connection with the description and, if necessary, by means of simple tests.

Finally, it should be noted that a purely functional definition of a device would be admissible only if there was no other possibility to describe the claimed device. However, this is not the case of the present application, since the description contains sufficient indications of the size and structural features of the filter used to allow the filter device to be more precisely identified (see, in particular, page 7, line 25 - page 8, line 13;

page 1, line 1 - page 19, line 24; and figures 7-10).

The intended restrictions are therefore not clear from claim 1, thereby contravening PCT Article 6. The same is true of the subject matter of dependent claims 2-4.

The clear technical device features of independent claim 1 are thus limited to a filter device arranged in an inner container and having an untreated water inlet, a purified water outlet, a filter conduit A having a flow channel section and a first filtration section, a filter conduit B having an adjustable blending valve and a second filtration section, a manifold and a connecting device. The following discussion of novelty and inventive step is based on these features.

2.2 It is not clear from the wording of claim 10 if the claim is dependent on claims 1 to 9 or if the inner container is claimed separately from the filter device. In the latter case, the requirement of PCT Rule 13.1 for unity of invention would not be met because the two claims have only the technical feature "filter device with inner container" in common and this feature is already known from the prior art (cf. point 3 below). Consequently, there is no technical relationship between the two claims within the meaning of PCT Rule 13.2 involving one or more of the same or corresponding special technical features. The same is true of claims 11-20, which refer back to claim 10.

3. The subject matter of claims 1-4 and 8 is not novel (PCT Article 33(2)):

3.1 Document D4 describes a filter device for purifying untreated water (D4, figure 2, reference sign 8) with an

untreated water inlet, a filter conduit A having a flow channel section and a first filtration section (figure 2, 20), and a blending conduit B having an adjustable blending valve (figure 2, 19) and a second filtration section (figure 2, 9). The blending conduit B is joined to the untreated water inlet via a manifold and to the untreated water outlet (11) via a connecting device (39). The outlet of the second filtration section (9) opens into the first filtration section (20). Each of the sections is arranged in an inner container (figure 2; column 8, line 52 - column 9, line 16). The subject matter of claims 1-4 and 8 is therefore not novel.

3.2 Document D1 discloses a filter device for purifying untreated water and having an untreated water inlet (D1, figure 1, reference sign 12), a filter conduit A (figure 1, 1) having a flow channel section and a first filtration section, and a blending conduit B having an adjustable blending valve (figure 1, 11) and a second filtration section (figure 1, 2). The blending conduit B is connected to the untreated water inlet by a manifold and to the untreated water outlet (figure 1, 17) by a connecting device. Each of the two sections is arranged in an inner container (figures 1, 4, 5, 6). The subject matter of claims 1-4 is therefore not novel.

3.3 Document D2 also shows a filter device for purifying untreated water and having an untreated water inlet (D2, figure 1, reference sign 178), a filter conduit A (figure 1, 100, left) having a flow channel section and a first filtration section, and a blending conduit B having an adjustable blending valve (figure 1, 176) and a second filtration section (figure 1, 100, right). The blending conduit B is connected to the untreated water inlet (figure 1, 170) by a manifold and to the untreated water

outlet by a connecting device. The subject matter of claims 1-4 is therefore not novel over document D2 either.

3.4 The subject matter of claims 1-4 is also anticipated by document D3 (cf. column 6, line 1 - column 7, line 52, and figures 1 and 2).